CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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06/26/91

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: GOLD CREEK GROUP

ALTERNATE NAMES:
CLAIMS MS 4075
NORTHERN LIGHT
BERNICE NO. 1
BIG TUNNELL
BOWMAN & REYNOLDS GILA GRP CO
GILA COUNTY CINNABAR CLAIMS

GILA COUNTY MILS NUMBER: 387

LOCATION: TOWNSHIP 8 N RANGE 9 E SECTION 34 QUARTER C
LATITUDE: N 33DEG 59MIN 35SEC LONGITUDE: W 111DEG 25MIN 42SEC
TOPO MAP NAME: RENO PASS - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
MERCURY

BIBLIOGRAPHY:
USGS RENO PASS QUAD
BLM MINING DISTRICT SHEET 130
USBM IC 8252 MERCURY POT OF THE US 1965 P 65
LAUSEN C &E D GARDNER QUICKSILVER RESOURCES OF AZ AZBM BULL 122 1927 P 89-93
ADMMR GOLD CREEK GROUP FILE
USGS BULL 620-E CONTRIBUTIONS TO ECONOMIC GEOLOGY 1916 P 45 TO 102

GOLD CREEK MERCURY MINES GILA COUNTY

"Mercury Deposits in Gila County"
Geology files

ABM Bull. 122 p. 89

USGS Bull. 620-F p. 121

IC 8252 p. 65

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Bernice I Date February 3, 1960

District Sunflower Dist., Gila-Maricopa Counties Engineer Lewis A. Smith

Subject: Conference with Wm. Brunson of Brunson & Grimes

Mr. Wm. Brunson reported that the tunnel under their pit had encountered some good ore along the right side in the last 25 feet of the 325 foot adit. It is planned to crosscut in both directions when the road is dried out sufficiently for access. The face showed several narrow veinlets of good material but the overall average as tested in the retort, was less than 4 pounds per ton. The material along the right side of the tunnel, previously mentioned, is much better and tests showed around 7 pounds per ton. At the face, according to Brunson, the grade gets progressively better from the left to the right.

MEMO

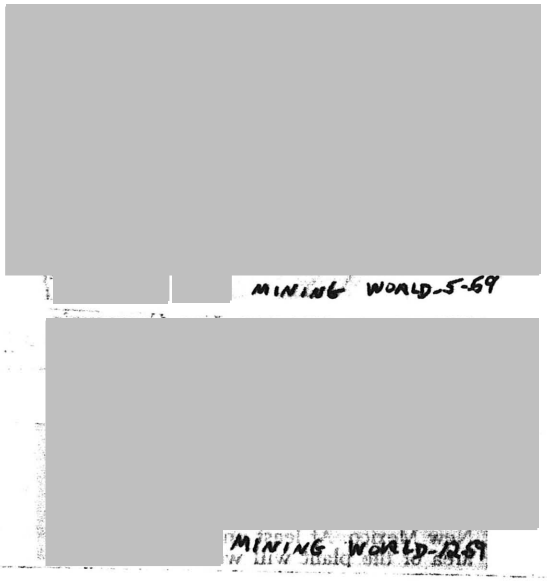
October 7, 1959

Bernice Group (McGhee Group) Sunflower District

According to Bill Brunson and Gordon Grimes, Brunson & Grimes have completed their 200' tunnel and are now directly below the open cut from which they had previously mined ore. They plan to core drill to the southeast and northeast. The end of the tunnel (last 20') is in a quartz stringer lode in a hard porphyritic rock (resembles andesite) which follows the general northeast-southwest trend of the earlier structures of the district. The tunnel for most of its length is in schist rocks which were mineralized to a variable extent by cinnabar and a little native quicksilver. Thin quartz stringers sometimes occupy the laminae of the schist. The cinnabar appears to be both disseminated in the schist and along the laminae as veinlets. Little of this material is of commercial grade. The bottom of the tunnel, near the end, was better than the back, so that Grimes & Brunson expect to obtain "good" ore below the tunnel. The right or SE side of the tunnel carries more quicksilver than the northwest side, according to them. The mill is doing well, although being run only when a stockpile is accumulated. Some ore is being custom milled. This is obtained from the Bacon lease on the Bernice I and the Sulphide Claims. Brunson is bulldozing some cover away from the lode outcrop.

Brunson stated that the Inspiration Geological staff were doing some exploratory work in the area.

Lewis A. Smith
Field Engineer



BERNICE CLAIMS (McGHEE GROUP)

GILA COUNTY
SUNFLOWER DIST.

The Bernice claims (McGhee Group) are worked under a partnership consisting of Gordon Grimes and William Bronson, both of Tonto Basin and R.E. McGhee, 149 S. Broad St., Globe who owns the claims. A present a tunnel (adit) is being driven to intercept an orebody previously uncovered higher up by a bulldozer cut. The adit has now been advanced 115' and will be over 200' long eventually. A mucking machine ($\frac{1}{4}$ yd) is being purchased from Miami Copper. The last ore from the cut mined averaged 10 lb per ton in quicksilver. The Rattlesnake mill has been repaired but is now idle pending the completion of the adit & a raise if the latter is needed (reported by Grimes at Tonto Basin).

LAS - WR - 6-5-59

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Bernice Claim (McGhee Group) Date 2-4-59

District Sunflower District, Maricopa County Engineer Lewis A. Smith

Subject: Supplementary Report

Brunson and Grimes are stripping, by cat, the overburden along the two sides of their pit so as to get immediate ore requirement while they drive a tunnel to get under their orebody. The material in the bottom of the cut, looks much better than nearer the top. The schist laminae are filled with orange limonite containing substantial amounts of disseminated or blebed cinnabar crystals. The tunnel should give them considerable depth and allow for a good tonnage by a cheaper and safer mining method. In the meanwhile the mill will be closed for a week. A reserve of millable ore is being stockpiled at the mine. The last ore milled averaged about 7 pounds per ton and yielded about a flask of quicksilver per day. They are shipping quicksilver to a California broker at $195.00 per flask, f.o.b. cars. It is planned to make an oxidized capping map of the Bernice Claim soon.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine McGee et al Group, Rattlesnake Mill Date 10-8-58

District Sunflower Dist., Gila County Engineer Lewis A. Smith

Subject: Interview with Brunson

The Rattlesnake Mill is being run by Gordon Grimes and Bob Brunson in partnership with Antony McGee and Bill Leech of Globe. The same partners operate the McGee Claims (present work is on Bernice Claim). The Basic Metals Co. is out of the area.

CLAIMS: 8 unpatented.

Haush

The retort has been equipped with a new/burner with much smaller spray vents, which projects the flame more evenly and to more than twice the distance up the retort drum. Previously much mercury, as flower, was lost because the old burner was not burning all of the oil and, therefore, sprayed the charge with the oil. This "floated" off much of the mercury. The retort is now being run at a temperature of 1100°. The extraction has reached about 80%. It has been determined that the schist ore, which is more porous than the quartz, yields more favorably to retorting than the quartz ore does. Mr. Grimes felt that finer crushing of the quartz type may yield better recovery. The feed at present is through a 1-inch mesh. Future plans call for a set of rolls which would reduce the feed to -3/8. The present mercury production has reached more than a flask per day from ore which averages about 7-8 pounds to the ton. However, since the mine is showing better ore, it is probable the feed can shortly be raised to about 10 pounds per ton. This combined with the expected higher recovery because of finer grinding should yield a good profit.

A tunnel, 150' long, in the north part of the McGee claims has been found to carry ore of varying grades throughout. Since the best ore appears to be nearer the face, it was felt that further work may be indicated in that area.

The present pit is 40' long, 10' wide, and 20' deep, and is now beginning to show better ore than heretofore was evident. Plans call for sinking the pit.

The ore consists of three types:-

(1) Coarser schist, ~~under~~ wider spaces between laminae, with blebs and veinlets closely conforming to the schist laminae.
(2) Impregnated extremely fine grained cinnabar and metacinnabar in sericite schist which has very closely spaced laminae.
(3) Quartz veins and veinlets contain blebs and feathery impregnations of cinnabar and limonite in the openings and out from them.

The workability of these types in the retort is in order as follows:

(1) Coarse porous schist (No.1)
(2) Quartz veinlets (No.3)
(3) Sericite schist (No.2)

The cinnabar in the sericite schist impregnations is so finely divided that this type of material would require very fine grinding for separation. This matterial also is relatively low grade and is not believed by the present operators to be amenable to good extraction. However, the McGee ore is most generally of types 1 & 3.

The mineralized zone is cut in several places by cross-breaks, which may have caused the localization of the better ore. A good job of mapping of the local structures would be beneficial.

Some metacinnabar is present.

GOLD CREEK MERCURY MINES GILA COUNTY

Ownerships:

McGee-Leech Claims

McGee - Globe
Leech
Gordon Grimes - Tonto Basin
Bob Bronson

4-Way partnership.
Basic Metals, Inc. has withdrawn entirely.
LAS 10-10-58

D ARTMENT OF MINERAL RESOU CES

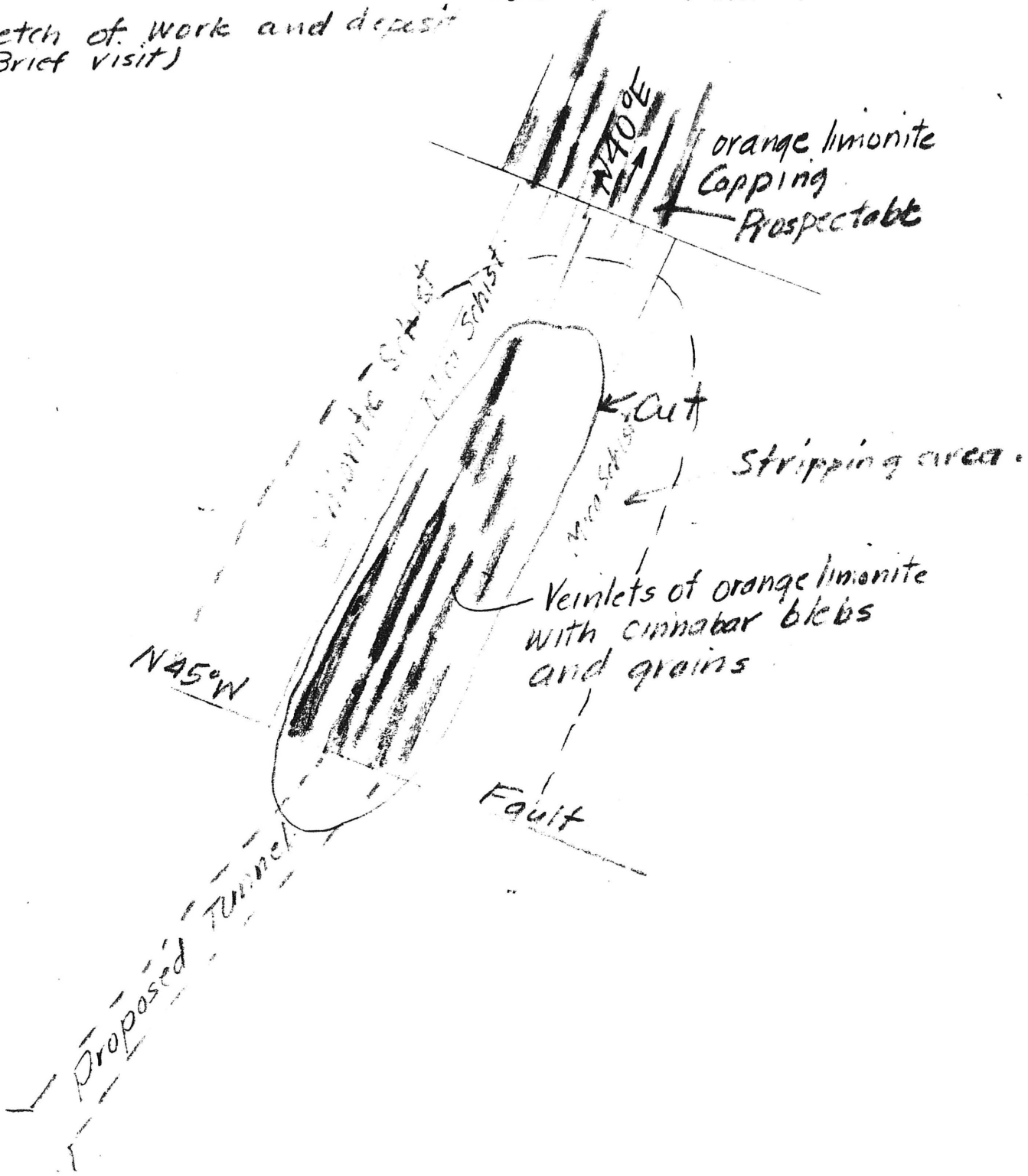
STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine: Bernice Claim (McGee Group) Date: 2-4-59

District: Sunflower District, Maricopa Co. Engineer: Lewis A Smith

Subject: Sketch of work and deposit (Brief visit)



DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

Date February 1, 1959

1. Mine: Gold Creek Mercury Mines
2. Location: Sec. 26,27 Twp. 8 n range 9 Range east Nearest Town Tonto Basin Distance 18 miler
   Direction Beeline &34 Highway Nearest R.R. Phoenix, Arizona Distance 90 mi.
   Road Conditions Good ----paved
3. Mining District and County: Sunflower ---- Gila county
4. Former Name of Mine: Gila county Cinnabar Claimes, (7)
5. Owner: Gordon K. Grimes & William A Brumson
   Address: Tonto Basin Arizona
6. Operator: Same as owners
   Address:
7. Principal Minerals: Cinnabar (Quick silver)
8. Number of Claims: Lode ..... Patented 8 ..... Unpatented .....
   Placer ..... Patented ..... Unpatented .....
9. Type of Surrounding Terrain: Mountain country

10. Geology and Mineralization:

(1) Northern Light Mine see pgs 19-20 of ABM Bull 122

11. Dimension and Value of Ore Body:

Please give as complete information as possible and attach copies of engineer's reports, shipment returns, maps, etc. if you wish to have them available in this Department's files for inspection by prospective leasors or buyers.

(over)

12. Ore "Blocked Out" or "In Sight":

Ore Probable:

13. Mine Workings—Amount and Condition:

No.	Feet	Condition
Shafts	This work has just been started	
Raises		
Tunnels	The old tunnels are being cleaned and re developed	
Crosscuts		
Stopes		

14. Water Supply: Good source from spring and mountain streams

15. Brief History:

Find enclosed a report that is old but we feel it is valuable.

New information will be available at end of 1959.

16. Remarks: This group of mines will be known as the ''Gold Creek Mercury Mines''

17. If Property for Sale, List Approximate Price and Terms:

Increases as development is done at present time we are asking seven hundred thousand. Terms to be arranged. (Price includes mill)

18. Signature: Gordon K. Grimes

William A. Brunson

The mineralized zone is cut in several places by cross-breaks, which may have caused the localization of the better ore. A good job of mapping of the local structures would be beneficial.

Some metacinnabar is present.

R E P O R T

on

GILA COUNTY CINNABAR CLAIMS

SITUATION The claims are situated in the Sunflower Mining District, Gila County, Arizona.

ACCESSIBILITY Thirty-seven miles from Roosevelt to Hardts Ranch on the Globe Roosevelt and Payson Stage Road. From Hardts Ranch seven miles by trail. However, a wagon can be driven to within three miles of the claims. A wagon road could be constructed to within two miles of claims at slight expense.

LOCATIONS The group comprises twenty claims. For names and relative positions see accompanying plat.

TITLES The first location of the claims was made in April, 1914. Possessory and location work is done for 1915. The titles will be held by the continued performance of annual assessment work.

WATER — There are several springs upon the property, sufficient for domestic and other purposes.

TIMBER — There is a dense growth of pine timber on some of the claims as well as cedar and oak, the surface is densely covered with brush growth.

TREND — The trend of the mineralized schist is 25 east of north, and is very persistent and continuous in its course full length of the claims.

DIP — The schist stands almost vertically and only deviates from this position where flexuring is in evidence.

CROPPINGS — The croppings are easily traceable by the yellow ochrous oxidization in the intensely altered schist.

TOPOGRAPHY — The area includes a prominent range of mountains having high narrow ridges and pointed cones, separated and cut by very deep and abrupt canons. The ridges radiate and have a declination from the most prominent eminence called Pine Mountain, and the drainage is generally toward the Tonto River

on the east.

ELEVATIONS Pine Mountain Pass 5.800'

Apex of Mountain over 6.000

Camp 4.900'.

GENERAL DESCRIPTION OF CLAIMS AND WORKINGS

Bernice No. 1

Drift 35' due north, coursing with schist, started to under cut croppings above.

Open cut south side of gulch, yellow oxidized distorted schist, with visible specks of cinnabar.

30' open cut and 9' drift, (Samples 14 and 15) in warped schist, the cut follows a harder core of quartz porphyry, evidently a silicification of the rhyolite. The schist is the usual mineral bearing brown and yellow ochrous with seams and veinlets of quartz and some times jaspa , diverting in all directions, constituting a regular net work. All the seams show specks of cinnabar in more or less quantity. The cinnabar is in evidence all through the schist.

The quartz enlarges to bunches and lenzes 6" to 8" in width, and from appearances is heavily charged with mercury sulphide.

There are numerous other cuts and open trenches along the outcropping, all show the presence of cinnabar.

MERCURY SULPHIDE NO. 1

10' vertical shaft in distorted schist, standing vertical y and highly charged with limonite, (Sample 16) 400' from north end line 10' shaft dense yellow ochrous schist and thin quartz seams, exhibiting cinnabar. There are several open cuts further north all showing rich stringers of cinnabar through the yellow schist.

MERCURY SULPHIDE NO. 2

Near S. end line 10' vertical shaft in crumpled yellow schist with specks and seams of cinnabar. Andesite is in contact with the schist at this point. Superficial workings along this claim prove the croppings its full length.

North Star No. 1

Open cut (Sample 17) in gray schist with bands of quartz, and seams of red jasperoid quatz all showing cinnabar, Andesite dyke on west. Near the bottom of the gulch on this claim would be an excellent position for a tunnel site; such working position for a tunnel site; such working could follow the lead full length of this claim and continue through Mercury Sulphide No. 2. At the open on the latter claim the working would develop the vein at a vertical depth of over 1,000 feet and 3,000 feet in length.

North Star No. 2

Open stripping in the usual mineralized schist, showing cinnabar. (Samole 18).

Northern Light No. 1

Open cut in gulch in ordinary ochrous schist, showing cinnabar (Sample 19). Above the vein to west the andesite dyke protrudes quite prominently. The working shows particles and flakes of iron sulphides, apparently marcasite, or pyrite.

Mercury Sulphide No. 4

Open cut in yellow ferrugenous schist, with seams and bunches of quartz, standing vertically (sample 20). The usual conditions exist at this end as previously described and appertaining to the south end.
Open cut lower down hill shows large bunch of quartz carrying cinnabar in contact with vicious andesite.

Mercury Sulphide No. 5

20' drift in box spring canon, at an angle to the course of the mineralized schist, the face of the working has just entered the latter which shows specks of cinnabar. (sample 21)

Mercury sulphides No. 7&8

Show the identical features and conditions as the rest of the claims. Open cuts constituting assessment work is done on each claim, and each shows the presence of cin-

ance. No samples were taken, as the previous sampling practically illustrates the mercurial content of the ore exposed by the superficial working.

NUMBER AND DESCRIPTION OF SAMPLING

Bernice No. 1 Claim

SAMPLE NO. 14 — 20" of quartz and schist across shoulder east entrance to drift, with visible specks of cinnabar.

SAMPLE NO. 15 — 4' across face of drift yellow ochrous schist, with thin quartz seams.

The two above samples constitutes practically a combined face of ore measuring 5' 8" in width with a further extended mineralization on both sides. In fact the cropping above this working are cross trenched for 20' in width, every foot carrying some value.

Mercury Sulphide No. 1

10' vertical shaft in distorted schist. Pannings from this dump show cinnabar.

SAMPLE NO. 16 — 5' across north side of shaft at right angles to formation. Schist is warped, but standing almost vertically, with seams and bands of silica and highly charged with limonite.

North Star No. 1

Sample NO. 17 — Open cut in gray schist, with bands of quartz and seams of red jasparoid quartz, containing visible specks of cinnabar.

SAMPLE NO. 18 — North Star No. 2

Culling for 10' across open stripping.

Sample No. 19 — Northern Light No. 1

General sample of mineralized schist in open cut.

Sample No. 20 — Mercury Sulphide No. 4

5' across face of open cut.

Sample No. 21 — Mercury Sulphide No. 5

5' across face of 20' drift.

Sample No. 22 — Mercury Sulphide No. 6

Open cut in schist heavily charged with limonite, general sample across open cut.

ASSAY RESULTS OF SAMPLING.

No. 14	2.45	49lbs. Mercury per ton
15	2.95	59lbs. Mercury per ton
16	1.05	21lbs. Mercury per ton
17	.60	12lbs. Mercury per ton
18	2.85	57lbs. Mercury per ton
19	.25	5lbs. Mercury per ton
20	1.80	36lbs. Mercury per ton
21	.90	18lbs. Mercury per ton
22	1.55	31 lbs Mercury per ton

GENERAL GEOLOGY AND ORE OCCURRENCE

The mineralized schist carrying the cinnabar (Mercury Sulphide) can be classed as chloritic and se icitic, and has been subjected to tremendous pressure, and alteration by this agency.

On the west the schist is generally accompanied along its course by an extrusive dark green altered andesite, conglomerate, a hard compact purple colored igneous dyke, followed by unmineralized schist in the order named. The igneous dyke is composed of varying sized, colored and classes of brecciated rocks, with a gangue cementation of hard silica.

Immediately adjoining the vein, or associated in close proximity on the east is rhyolite, gray and light cream colored. It is vertically sheeted or plane-parallel in contact with the vein; it also alters or merges into a rhyolite quartz pophyry, and occasionally carries cinnabar asis evidenced in the working on the Bernice Claim.

Following the course of the schist it continues in tongues or dykes and prominent plugs, adjoining this easterly, is umineralized schist, and dark brown quartzite, standing almost vertically and with only a slight inclination to the east. Rough prominent weathered exposures of this formation are seen to the northeast, flanking the mountain ranges.

The ore bearing schist is always heavily charged with limonite (iron Sesquoxide) colored brown to bright yellow, and is evidently resultant of alteration from Pyrite (iron disulphide). The fracturings which the silicous mercury carrying solutions have charged, are simply adjustment or stress fractures. Through all the mass as well as the silicous seams can the cochineal color of themercury sulphide be recognized. All the evidence as exhibited and demonstrated by the shallow workings proves that the genetic source of the hot sliceous mineral bearing solutions have eminated from the adjoining rhyolite. In fact in several places where the rhyolite is porphyrized, it constitutes cinnabar ore and this condition is practically

proven by some of the workings. All through the schist ore body, the quartz and quartz seams, the presence of cinnabar is plainly visible, as well as in the jaspar seams, and jasparoid quartz, colored red by hydrous iron sesquioxide.

(For sequence of formations see accompanying geological cross section).

FUTURE DEVELOPMENT

One important and satisfactory feature in connection with this property is the fact that the claims could be fully and efficiently demonstrated and developed by drift work along the vein.

There would be no necessity whatever for the sinking of costly shafts, or hoisting plants for years to come.

SURFACE ORE

In addition to this favorable condition a great deal of ore could be gotten by open stripping and gouging and there is no reason why ore should not be gained in this manner; it would assist greatly at the beginning of reduction operations especially.

ORE DETERIORATION

However, it must be borne in mind by demonstrated proof, that the lowest grade ore is on the surface or where it has been subjected to the action of weathering. The ore taken from the workings also if exposed to weathering for a limited time only, deteriorates in value considerably.

DEPTH BY DRIFTING

As previously stated, a drift started on the vein in one of the deep canons could be driven along the vein for the length of three claims, and a depth on the vein of 1,000 to 1,500 feet could be gained.

COST OF WORK

Contracts for this class of work can be made for Five Dollars per lineal foot for 1,000 feet, Contractors to furnish all powder and steel.

An additional charge of One Dollar per foot would probably ve made for each additional 1,000 feet advanced in the workings.
By the above figures it will be readily seen the ore could be mined at very low cost.

FAVORABLE CONDITIONS

All these favorable conditions would allow the property to make a very substantial margin of profit on a very low grade of ore.

VALUE OF ORE

At the present price of quicksilver 1 per cent of ore is worth $25.00 per ton; one-half per cent ore would be worth $12.00 Per ton. Of course, the future of the property depends upon the general average tenor of the ore in the vein. However, there is no apparent reason to assume that the ore would depreciate below the lowest value stated, but on the contrary, it is to be believed and wxpected that the ore will improve in quicksilver contents at a short distance below the surface. The shallow workings already prove this beyond any question of doubt, and the assay results are an absolute proof.

COST OF DEVELOPMENT

In my opinion an expenditure of $15,000.00 would amply demonstrate the future value and possiblities of the property. This is a very small amount considering the great importance and value of the property it might be the means of extablishing.

FURTHER OUTLAY

Only a very small further outlay for imporvement in trails or roads is necessary, until the claims are fully proven. For all required necessities could be easily packed in.

GENERAL SUMMARY AND CONCLUSIONS

My opinion of the property is exceedingly favorable for the following reasons:

The persistency and continuity of the vein for such a long distance; its general strength in width and mineralization, and its workable value in cinnabar contents wherever opened up, and an expectant impovement in these values, below the surface.

The low cost of working, and the really small amount of capital required to demonstrate or exploit the property, and with such expectancy and future possibilities.

The property is unquestionable meritorious and the favorable conditions fully warrant the expenditure or capital to practically demonstrate and establish its future extent and permanent value.

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Mining Engineer

Dated at Phoenix,
July 20, 1915